

Department of Energy Report to Congress

FY 2001

Departmental Energy Management Program Accomplishments

December 19, 2001



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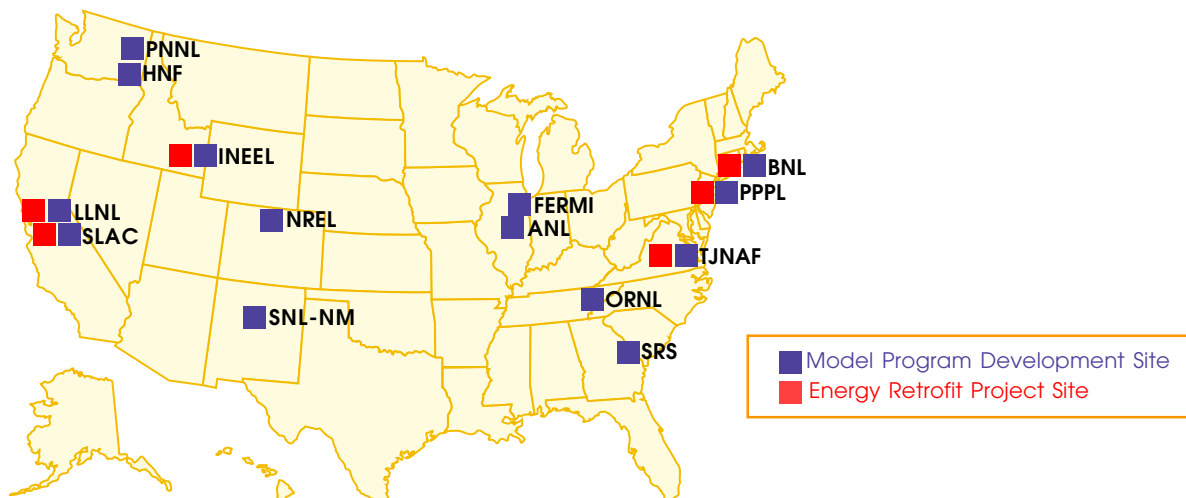
Executive Summary

Federal agencies are required by the National Energy Conservation Policy Act as amended by the Energy Policy Act of 1992 to maintain an energy management program and to annually report to Congress on energy management activities. The Department of Energy (DOE) received direct funding for energy management activities under the Departmental Energy Management Program (DEMP) for the first time in FY 2001.

Six different DOE sites received DEMP Energy Retrofit Project Support funds totaling \$500,000 for energy efficiency projects at their sites. These projects were selected through a DOE-wide competition for these funds, which resulted in the selection of the most cost effective projects. These direct funded projects will annually save 9,145,000 kilowatt-hours of electricity and 2,400 million British thermal units of natural gas. The Government will save approximately \$300,000 a year in avoided utility costs. The return on investment is 42 percent using life cycle cost analysis.

Ten different DOE sites received funds totaling \$1,426,400 for DEMP Model Program Development. These Model Programs included such initiatives as sustainable building design, the acquisition of Energy Star™ Labels, building re-commissioning and reducing energy consumption of excess facilities. The Model programs provided a springboard for the introduction of best practices in energy management into DOE's facilities. DOE believes that many of the model programs will have a return on investment of greater than 25 percent. The actual return on investment will be measured through information gathered from the initiatives once they are implemented. Most of these initiatives will be implemented within one year of receiving funding. DOE intends to transfer the successful results from the DEMP Model Programs to other DOE sites for additional energy management savings. Also, DOE's Federal Energy Management Program can provide information from the successful results of the DEMP Model Programs to other federal agencies.

Figure 1: Sites receiving DEMP funds



SITES

ANL: Argonne National Laboratory
BNL: Brookhaven National Laboratory
FERMI: Fermi National Accelerator Laboratory
HNF: Hanford Site
INEEL: Idaho National Engineering & Environmental Laboratory
LLNL: Lawrence Livermore National Laboratory
NREL: National Renewable Energy Laboratory

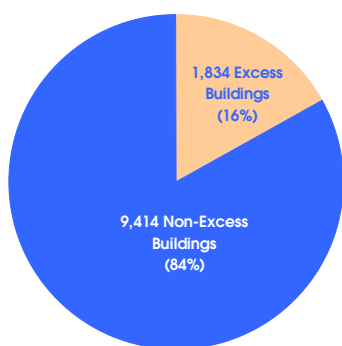
ORNL: Oak Ridge National Laboratory
PNNL: Pacific Northwest National Laboratory
PPPL: Princeton Plasma Physics Laboratory
SLAC: Stanford Linear Accelerator Center
SNL-NM: Sandia National Laboratory-New Mexico
SRS: Savannah River Site
TJNAF: Thomas Jefferson National Accelerator Facility

Background

DOE Facilities

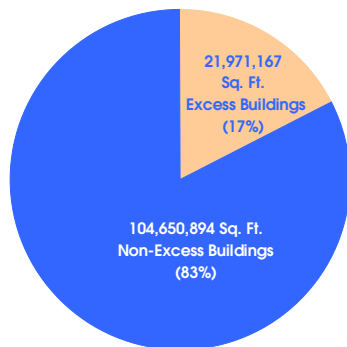
The Department of Energy's (DOE) total energy costs for FY 2000 were over \$250 million. In the standard buildings category, DOE used approximately 250,000¹ British thermal units (Btu) per gross square foot site energy, compared to approximately 450,000² Btu per gross square foot site energy in 1985. Energy costs in the standard buildings category in FY 2000 were \$162 million. The remainder of DOE's energy costs occurred in energy-intensive industrial, laboratory, and research facilities that fluctuate directly with mission support activities. These facilities consume approximately 580,000³ Btus per gross square foot site energy, compared to approximately 1,350,000⁴ Btu per gross square foot site energy in 1985.

Figure 2: Number of Buildings Owned and Leased by DOE



DOE owns or leases approximately 11,000 buildings at over 50 sites throughout the United States. Currently, DOE-owned buildings comprise 126.6 million gross square feet. This building space is divided into laboratory space (24%), production space (32%), office space (14%) and other activities such as storage and service space (30%).

Figure 3: Floor Area of Buildings Owned by DOE



About 1,800 (16%) of DOE's buildings were originally designed and constructed to support Cold War objectives and have been declared excess. These excess buildings constitute 21.9 million gross square feet and use about 6.7 trillion Btu annually, at a cost of about \$52 million.

1. Approximately 541,000 Btu per square foot of source energy
2. Approximately 774,000 Btu per square foot of source energy
3. Approximately 1,732,000 Btu per square foot of source energy
4. Approximately 3,037,000 Btu per square foot of source energy

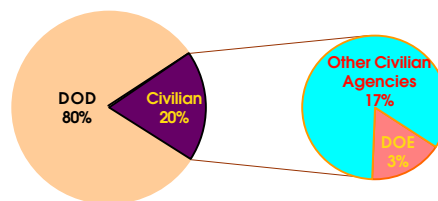


The U.S. Department of Energy has implemented lighting systems energy conservation measures at its headquarters building in Washington, DC, and has plans to further reduce headquarters energy usage.

DOE Progress toward Energy Reduction Goals

DOE has the second largest energy consumption of all civilian agencies. Due to an active utility management program, it also has the lowest average unit cost for electricity in the Federal government. DOE has led other Federal agencies in the efficient use of energy, significantly reducing energy consumption and accounting for over \$100 million in annual avoided costs.

Figure 4: DOE Share of Federal Government Energy Consumption

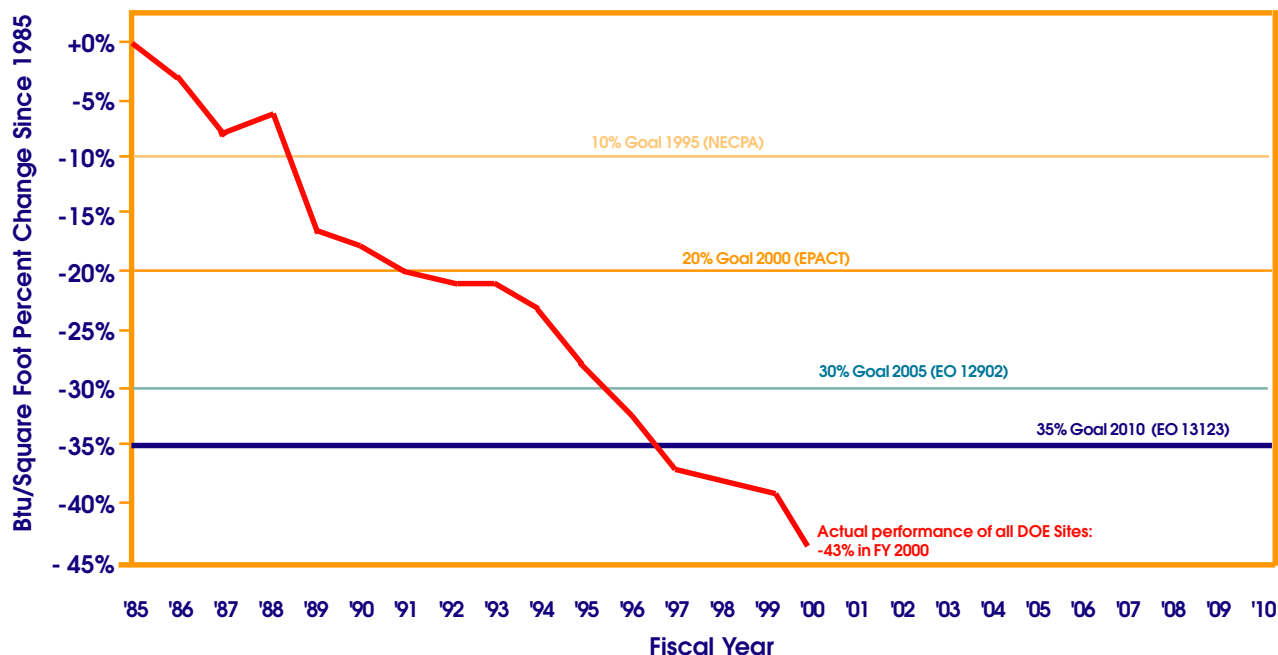


Prior to DEMP funding, DOE had an In-house Energy Management (IHEM) Program. IHEM provided direct funding for energy efficiency retrofit projects from 1978 through 1995. The direct funding allowed DOE to build up a cadre of energy champions and trained energy managers at its sites. The champions initiated improvements in energy management and introduced energy efficiency technologies into the sites. From FY 1978 through FY 1995, IHEM directly funded a cumulative investment of over \$300 million in energy retrofit projects, with a return on investment of greater than 25 percent. Over 1,000 completed energy retrofit projects resulted in approximately a \$100 million per year reduction in energy costs and a

savings of over 3 trillion Btu per year in energy. In FY 2000, DOE reduced energy consumption in its standard buildings by more than 43 percent in Btu per gross square foot site energy (or more than 30 percent in Btu per gross square foot of source energy) compared to FY 1985. Energy management activities and changes in mission activities, notably from weapons production to environmental restoration, contributed to the reduction. This reduction in energy consumption also reduced

emissions of greenhouse gases by over 22 percent from FY 1990 levels, or 1.3 million tons - equivalent to removing over 900,000 cars from the road. In addition to reductions in energy consumption, DOE accomplished emissions reductions by switching from fuel oil and coal to less greenhouse gas intensive fuels. DOE reduced its use of coal and fuel oil from FY 1990 levels by greater than 70 percent and 58 percent, respectively.

Figure 5: DOE Performance Toward Site Energy Reduction Goals for Buildings



Energy Management Infrastructure

The Senior Official

The Assistant Secretary for Energy Efficiency and Renewable Energy is the Senior Agency Official responsible for advocating policy, programs, and new initiatives to conserve and increase the efficiency of energy use at DOE facilities. The Assistant Secretary's office is also responsible for conducting research in energy conservation and renewable energy technologies and for accomplishing energy conservation actions at all federal facilities through the Federal Energy Management Program (FEMP).

The Federal Energy Management Program

The Director of FEMP is responsible for implementing the policies, programs, and new initiatives of the Assistant Secretary within all federal agencies including the DOE. FEMP benefits corporate DOE by increasing the energy efficiency and reducing the operating costs of DOE facilities. FEMP funds are used to support best practices in energy management and acquire energy efficient technologies, either directly or indirectly through private sector investment. These are activities that would not be funded by the mission oriented

DOE Program Offices. In addition, FEMP sponsors a team of energy management professionals from DOE headquarters, field offices and sites called the Energy Efficiency

Working Group. This group has a goal of promoting excellence in energy management through the timely exchange of programmatic and technical information.

FY 2001 Activities

Program Balance

In FY 2001, the Departmental Energy Management Program (DEMP) received \$1.9 million in funding. FEMP distributed DEMP funds under the categories of Model Program Development and Energy Retrofit Project Support as shown in Table 1.

Table 1: Program Activities

Program Activity	Description	Period of Activity	Funding	Initial results
Model Program Development	Emphasizes new areas for energy management at various DOE sites such as expanding the use of private sector financing, expanding purchase of Energy Star™ products replacing chillers using ozone depleting substances, reducing energy consumption in surplus facilities, evaluating buildings for Energy Star™, and assisting in whole building design.	2001 through 2002	\$1.4M	TBD
Energy Retrofit Project Support	Reduce future energy and maintenance costs at DOE sites through direct funding for energy retrofit projects and new energy technologies.	2001 through 2003	\$0.5M	\$0.3M per year

ions in energy use. Activities within one sub-program can complement the other subprogram. For instance, through energy audits funded under Model Program Development, site personnel identify opportunities to invest in new energy efficiency technologies that can be funded under Energy Retrofit Project Support.

Additionally, Energy Retrofit Project Support provides a tangible incentive to the managers of

The DEMP approach seeks a balance between activities to introduce new energy management practices into DOE sites through Model Program Development and funding support for energy projects through Energy Retrofit Project Support that provide known energy savings and reduct-

DOE sites to engage in energy management activities and to identify additional methods for achieving energy savings. The energy retrofit projects have known returns on investment of greater than 25 percent, based on results from over 1,000 projects that were funded by the



Energy Retrofit Support funds will be used to relamp and install lighting controls at DOE sites.

IHEM Program. DEMP requires both funding approaches to sustain an effective program balance between implementing new initiatives for energy management emphasizing best practices and achieving known quantifiable energy savings through retrofit projects.

In FY 2001, the majority of the DEMP funding was used to introduce new energy management practices into DOE sites through Model

Program Development. This differed from the FY 2001 budget request to Congress which assumed that the majority of DEMP funding would be used to fund energy retrofit projects. The change in funding was due to an increased emphasis on activities funded through Model Program Development such as the identification of cost effective energy management projects and implementing new energy management initiatives at DOE sites.

Energy Retrofit Project Support

Six different DOE sites received Energy Retrofit Project Support funds for energy efficiency projects at their sites. These projects were selected through a DOE-wide competition for these funds, which resulted in the selection of the most cost effective projects. The DEMP funded energy efficiency retrofit projects for FY 2001 include:

⊙ **Klystron Energy Reduction through the use of Variable Voltage Cathode Power Supply LED Modulating Anode Project** at the Thomas Jefferson National Accelerator Facility (TJNAF). TJNAF received \$323,600 to retrofit 43 klystron power supplies to allow adjustment of the input AC voltage. Klystron power supplies convert the incoming electricity to microwave energy. The

project will save 8,600,000 kilowatt-hours (kWh) and \$270,000 annually when completed.

⊙ **Install Variable Frequency Drives with Direct Digital Control Project** at the Princeton Plasma Physics Laboratory (PPPL). PPPL received \$55,000 for direct digital control of fan speed. The project will save 203,000 kWh and 2,400 million British thermal units (MBtu) of natural gas and \$18,000 annually when completed.

⊙ **Upgrade of the Energy Management System and Lighting Systems Project** of the Engineering Research Office Building at the Idaho National Engineering and Environmental Laboratory (INEEL). The project will allow the INEEL to apply for the Energy Star Building label. INEEL received \$23,600 for occupancy sensors and light sensors to automatically turn off lights that are not needed. The project will save 80,000 kWh and \$5,000 annually when completed.

⊙ **LED Replacement for Safety Locator Lighting Project** at the Brookhaven National Laboratory (BNL). BNL received \$46,000 to replace existing incandescent lamps and fluorescent lamps with light emitting diode (LED) bulbs, resulting in both energy and maintenance savings. The project will save 63,860 kWh and \$7,000 annually when completed.

⊙ **VendingMiser Retrofits Project** at the Lawrence Livermore National Laboratory (LLNL). LLNL received \$26,400 to install VendingMiser® controllers on selected vending machines to reduce their power requirements when not in use. The project will save 110,460 kWh and \$4,000 annually when completed.

⊙ **Lighting Control - Building 041, Second Floor Project** at the Stanford Linear Accelerator Center (SLAC). SLAC received \$23,400 to install light switches and occupancy sensors. The project will save 89,000 kWh and \$3,500 annually when completed.

In summary, these direct funded projects will annually save 9,145,000 kWh of electricity and 2,400 MBtus of natural gas. The Government will save approximately \$300,000 a year in avoided utility costs. The combined simple payback period of these investments is less than two years and the return on investment is 42 percent.

Model Program Development

Ten different DOE sites received funds for Model Program Development. These Model Programs included such initiatives as sustainable building design, the acquisition of Energy Star Labels, building re-commissioning and energy consumption reduction in excess facilities. DEMP Model Programs provided a springboard for the introduction of best practices in energy management at DOE sites. DOE believes that many of the Model Programs will have a return on investment greater than 25 percent. The actual return on investment will be measured through information gathered from the funded activities once they are implemented. Most of these initiatives will be implemented within one year of receiving funding.

DEMP Model Program Development will assume some of the risk associated with adopting new energy management practices, but if successful, many of these practices have the potential to provide significant returns for both energy management and mission oriented activities. One example is the use of energy savings performance contracting (ESPC) to reduce energy consumption in contaminated excess facilities. With over 1,800 excess facilities this is expected to have wide application. Where Model Programs have broad application, such as Energy Star procurement practices, FEMP can use Model Programs to demonstrate the benefits of systematically adopting these practices. In addition, FEMP can transfer successful results to other DOE sites and all federal Agencies.

Private Sector Financing

DOE provided field sites with DEMP funds under Model Program Development to develop projects that can be funded by the private sector through the use of Energy Savings Performance Contracts (ESPC) or Utility Energy Services Contracts (UESC). FY 2001 initiatives undertaken by Model Program Development included:

At the Hanford Site, DOE's Richland Operation Office will investigate the feasibility of using an energy savings performance contract (ESPC) delivery order under DOE's Regional ESPC, to accomplish energy conservation opportunities in facilities designated as surplus (excess). There are many facilities at Hanford designated as excess that continue to use energy (primarily

electricity) to support fire protection and environmental surveillance systems. Reducing the energy used in surplus facilities has the potential to provide significant cost savings.

The Idaho National Engineering and Environmental Laboratory (INEEL) is also evaluating ESPCs for energy efficiency retrofit projects to reduce the cost of maintaining excess facilities. The importance of improving the energy efficiency of the INEEL recently increased as a result of an electric rate increase of 53 percent due to the demand for electricity from California and low water in hydroelectric dams from a prolonged drought. In addition, the INEEL began discussions with its utility provider to explore investment opportunities through UESC to accomplish additional energy conservation projects.

DOE's Savannah River Site (SRS) will investigate opportunities for their third ESPC task order. Previous task orders included replacing inefficient lighting and air-conditioning equipment. The third task order will investigate additional opportunities to reduce the demand for electricity.

The Fermi National Accelerator Laboratory (FERMI) will identify energy conservation opportunities in partnership with its electricity and natural gas suppliers leading to the development of UESC. FERMI has already identified millions of dollars of investment opportunities and fully expects to identify even more opportunities.

Energy Audits

DOE prioritizes requests for funding of energy audits under Model Program Development according to the potential for success in identifying cost effective energy conservation projects. Factors for ranking include energy unit cost, total energy consumed at the facility, and energy consumed per gross square foot.

The first priority for these funds is to collect information and establish baseline energy use and costs for negotiating ESPCs and UESCs with energy services companies and utility companies, respectively. The second priority of audits is to support other specific strategies such as establishing benchmarks to qualify office buildings for the Energy Star™ Building

label. The third priority is to perform comprehensive audits of 10 percent of facilities each year. New activities initiated under DEMP Model Program Development in FY 2001 include:

The Fermi National Laboratory (FERMI) will identify cost effective energy efficiency lighting systems, and heating, ventilating and air-conditioning (HVAC) systems and their control systems. In addition, FERMI is investigating upgrading their Supervisory Control and Data Acquisition (SCADA) System Upgrade to allow for better control of electricity once it reaches the laboratory. FERMI will also initiate a Site-wide Computerized Management Program to replace the labor intensive activities used to control energy using systems.

The Idaho National Engineering and Environmental Laboratory (INEEL) will identify energy efficiency retrofit projects to reduce the cost of their energy purchases. The audit results will either form the baseline for an ESPC or for a direct funded project.



Energy Star™ compliant lamps are available for virtually all DOE lighting applications

Energy Star™ and Other Energy-Efficient Products

DOE issued an acquisition letter to all of its contracting officers alerting them to purchase DOE/EPA Energy Star™ products and other energy-efficient products. Most sites have already incorporated energy-efficient goods into their purchasing systems. DOE will continue to purchase these goods when they are life-cycle cost effective and compatible with mission

requirements. As a new initiative under DEMP Model Program Development in FY 2001, the National Renewable Energy Laboratory (NREL) developed and implemented a procurement policy for Energy Star™ products and operational procedures to ensure that these products are used effectively for maximum energy savings.

Energy Star™ Buildings

DOE is surveying its sites and evaluating office buildings with metered data for the Energy Star™ label. To date, two office buildings at the Nevada Operations Office, one at the Oak Ridge National Laboratory and one at the Oakland Operations Office have acquired Energy Star™ labels.

Completed surveys suggest that DOE does not have many buildings that fit the Environmental Protection Agency's Energy Star™ profile. Most DOE buildings are not predominately used as office buildings, but have office space mixed with laboratory, computing space, and control rooms. These mixed-use buildings require much more conditioned air than standard buildings due to safety and cleanliness concerns. The requirements for large amounts of conditioned air cause them to be much more energy intensive than standard office spaces. Also, many of the buildings that DOE lists as office buildings are modular in construction and considered temporary. New activities initiated under DEMP Model Program Development in FY 2001 in conjunction with obtaining the Energy Star™ Building label include:

The Oak Ridge National Laboratory (ORNL) received funds to meter eleven office buildings that are good candidates for the Energy Star™ label.

The Idaho National Engineering and Environmental Laboratory (INEEL) received funds to identify facilities that would benefit from accurate meters. INEEL will install meters and collect meter data for at least two of the best candidates for the Energy Star™ in preparation of applying for the Energy Star™ label.

Where office buildings that are considered good candidates fall short of the benchmark test, DOE is encouraging that they be audited and upgraded with life-cycle cost-effective energy

efficiency retrofits. DOE is encouraging its field elements to use ESCPs to upgrade the facilities with energy efficiency technologies. The energy services companies would invest in the energy efficiency improvements and apply for the label.

Sustainable Building Design

During FY 2001, DOE emphasized sustainable design practices under DEMP Model Program Development with an emphasis on energy efficiency at five DOE sites. To help introduce sustainable building design as a standard operating practice, DOE is encouraging several of its sites to become partners in the DOE/EPA



The National Renewable Energy Laboratory's Thermal Testing Facility is being used to show how sustainable design strategies can be integrated into a variety of commercial buildings, offices, warehouses, and institutional facilities. Each innovative "air tree" shown above provides ventilation for six offices.

Labs for the 21st Century program. The program is a voluntary program similar to the Energy Star™ program. It has the express purpose of improving the energy efficiency and environmental stewardship of laboratories. Laboratories are highly energy intensive and present unique safety and health challenges that must be considered during design or when proposing upgrades. DOE's Lawrence Berkeley National Laboratory, Sandia National Laboratory and the National Renewable Energy Laboratory have committed to become partners. Each partner receives design assistance and positive recognition as a benefit. In FY 2001, DOE funded under

DEMP Model Program Development the following sustainable design initiatives:

The Sandia National Laboratory-New Mexico (SNL-NM) is reviewing and revising its standard construction specifications and Design Manual to incorporate sustainable design. SNL-NM is also training its design professionals and will be providing lessons learned to other DOE sites.

The Idaho National Engineering and Environmental Laboratory (INEEL) is applying sustainable design principles to the conceptual design of the Subsurface Geosciences Laboratory. As part of that effort the INEEL is preparing a life cycle cost assessment showing that a more energy efficient building design is cost effective to construct. INEEL intends to evaluate the design using the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) software analysis package.

The Pacific Northwest National Laboratory (PNNL) is implementing standards for sustainable design for its capital and expense facility projects. PNNL will develop working standards and economic calculations for use by other DOE sites.

The National Renewable Energy Laboratory (NREL) is accrediting LEED evaluators and certifying their planned Science and Technology Facility. NREL will also be expanding its sustainable energy website.

The Oak Ridge National Laboratory (ORNL) is including sustainable design principles into three new buildings. ORNL will also develop criteria for selecting private sector building developers, and transfer lessons learned to DOE's Laboratory Facility Revitalization Initiative.

Industrial Facility Efficiency Improvements

Reliability of the energy supply is an important energy security issue for DOE's mission critical research and industrial facilities. In these facilities, DOE seeks to increase energy efficiency while increasing overall system

reliability and maintaining mission capabilities. New activities being initiated in FY 2001 under DEMP Model Program Development within industrial or research facilities include:

The Thomas Jefferson National Accelerator Facility will evaluate new klystron designs for energy efficiency and develop engineering and economic parameters for the final design of a new klystron. Klystrons are devices that convert dc power into microwave power to energize the accelerator used for high-energy physics research. The goal is to increase the efficiency of the conversion process from 35 percent to over 60 percent.

The Fermi National Accelerator Laboratory (FERMI) will evaluate and identify cost effective solutions to improve humidity control in the fixed target areas of its accelerator. FERMI has identified excessive energy costs, as well as excessive maintenance costs and environmental disposal costs in these areas.

Water Conservation

DOE recognizes a potential to save money and natural resources through water conservation. In FY 2001, DOE is encouraging its field offices and sites to include water management plans within their facility management plans. New activities for FY 2001 under DEMP Model Program Development include:

The Idaho National Engineering and Environmental Laboratory (INEEL) is preparing a comprehensive water management plan that



Sensors as shown above will be installed at faucets, urinals and water closets.

includes pumps, distribution piping and fixtures inside the buildings. INEEL will audit at least 10 percent of its water using facilities using FEMP's Best Management Practices Guide.

The Fermi National Accelerator Laboratory (FERMI) is evaluating modifications to its site-wide low conductivity water (LCW) system. FERMI will be evaluating the pumps and the speed at which the LCW is flowing through the system in support of experimental high energy physics equipment.

Energy-Efficient Operation and Maintenance of Buildings

The Building Re-Commissioning Initiative corrects inefficiencies resulting from improper operating conditions within existing buildings. Improper operating conditions occur as equipment performance degrades with age and tenant requirements change during the course of a building's existence. Re-commissioning redefines operating parameters for a building and identifies operating practices and technologies that can be used to optimize a building's efficient use of energy. The optimization reduces operating costs in terms of energy and maintenance. A concurrent benefit is an increase in occupant comfort and productivity. New activities initiated in FY 2001 under DEMP Model Program Development to improve operation and maintenance practices included:

The Pacific Northwest National Laboratory (PNNL) will re-commission one of its major laboratories. In addition, PNNL will improve measurement and verification tools for re-commissioning. PNNL will develop a checklist and economic calculations for use by other DOE sites. PNNL will post the results of the audit, tools and reports on the Internet.

The Argonne National Laboratory (ANL) will develop a re-commissioning process using one of its buildings as a prototype. The process will develop the tools to allow ANL to apply the re-commissioning process to the entire laboratory.

Departmental Energy Management

Program Evaluation and Potential Energy Savings

FEMP will continually evaluate the FY 2001 activities that have been funded under DEMP Energy Retrofit Project Support and Model Program Development. Energy retrofit projects need to be completed in a timely fashion to achieve their expected savings of \$300,000 per year with a return on investment greater than 25 percent. FEMP will ensure that the majority of projects are completed within one year of receiving DEMP funding. FEMP will also need to ensure that these projects continue to provide savings throughout their expected lifetime, and will develop a process of monitoring a sample of these projects on a periodic basis to ensure that the savings and the high return on investment is being achieved.

FEMP also believes that many of the Model Program Initiatives funded under DEMP will have a return on investment greater than 25 percent. The actual return on investment will be measured through information gathered from the initiatives once they are implemented. Most of these initiatives will be implemented within one year of receiving funding. FEMP will gather information from these funded activities to evaluate their actual savings and return on investment potential. FEMP will also transfer the successful results from the DEMP Model Program Development to other DOE sites for additional energy management savings.

The Department of Energy (DOE) with over 50 sites, has tremendous potential for energy and cost savings, if DEMP is fully implemented. As can be seen from the results of the FY 2001 funding, the savings from energy management activities can be substantial, even at the limited number of DOE sites that received this funding. It is expected that all DOE sites could benefit from DEMP funded energy management activities with similar results and returns on investment in future years.



Glossary

ANL	Argonne National Laboratory
BNL	Brookhaven National Laboratory
Btu	British Thermal Unit
DEMP	Departmental Energy Management Program
DOE	The Department of Energy
EEWG	Energy Efficiency Working Group
EMCS	Energy Management and Control System
EO13123	Executive Order 13123
ESCO	Energy Services Company
ESPC	Energy Savings Performance Contract
FEMP	Federal Energy Management Program
FERMI	Fermi National Accelerator Laboratory
FY	Fiscal Year
HNL	Hanford Site (Richland, WA)
HVAC	Heating, Ventilating and Air Conditioning
INEEL	Idaho National Environmental Engineering Laboratory
LBNL	Lawrence Berkeley National Laboratory
LEED	Leadership in Energy and Environmental Design
LLNL	Lawrence Livermore National Laboratory
NETL	National Energy Technology Laboratory
NREL	National Renewable Energy Laboratory
ORNL	Oak Ridge National Laboratory
PPPL	Princeton Plasma Physics Laboratory
SCADA	Supervisory Control and Data Acquisition System
SLAC	Stanford Linear Accelerator Center
SNL	Sandia National Laboratory
SRS	Savannah River Site
TJNAF	Thomas Jefferson National Accelerator Facility
UESC	Utility Energy Services Contract

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